

Absorptive 2-20GHz Coaxial SP2T Switch

Features

- Wide Band Operation 2-20GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2		8	8		12	12		20	GHz
Insertion Loss		1.5	1.7		1.8	2.2		2.8	3.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	70	80		70	75		60	65		dB
Input VSWR		1.6	1.8		1.6	1.8		1.6	1.8	: 1
Output VSWR		1.6	1.8		1.6	1.8		1.6	1.8	: 1
RF Input Power (CW)			30			30			30	dBm
DC Power Dissipation		0.4			0.4			0.4		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed					100					ns
Weight					0.65 Max.					ounces
Impedance					50					Ω
Bias Current (+5V / -5V)					80/50 Max.					mA
Input / Output Connectors					SMA-Female					
Finish					Gold Plated					
Material					Aluminum					
Sealing					Hermetically Sealed (Optional)					

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
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Environmental Specifications

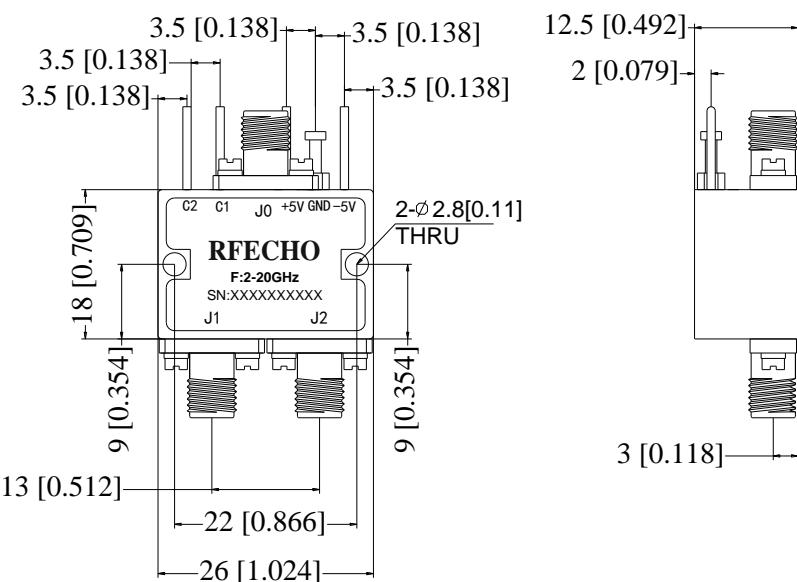
Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

Part No.	Description
OSA0202002000A	SP2T 2-20GHz PIN Diode Switch

Outline Drawing:

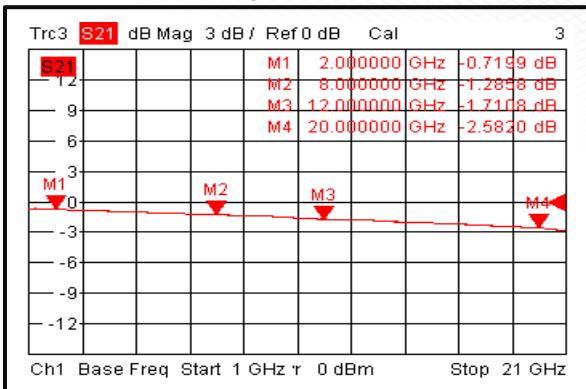
All Dimensions in mm (inches)



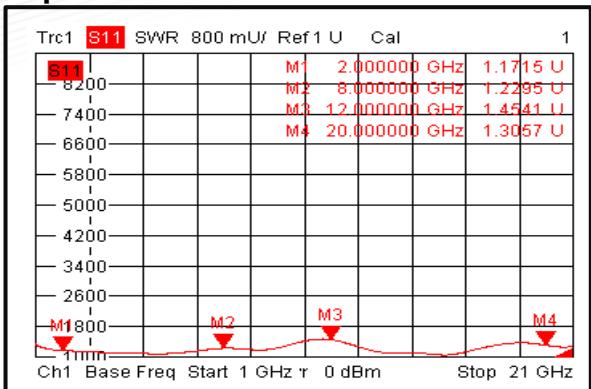
Truth Table

TTL Control Voltage	Low(0)=0~0.8V	
THRESHOLD	High(1)=2.8~5V	
Control Input TTL	State	
C1		
1	0	J0-J1
0	1	J0-J2
0	0	OFF
1	1	OFF
Control Pin Customization available upon request		

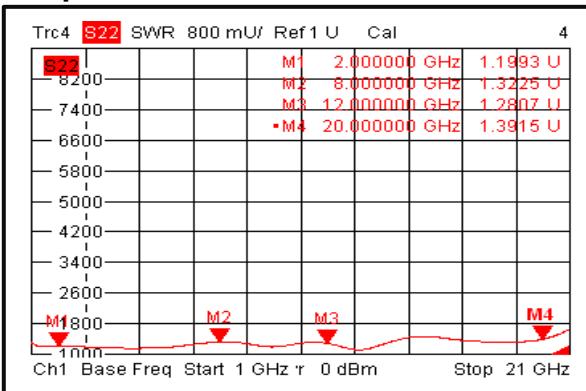
Insertion Loss @+25°C



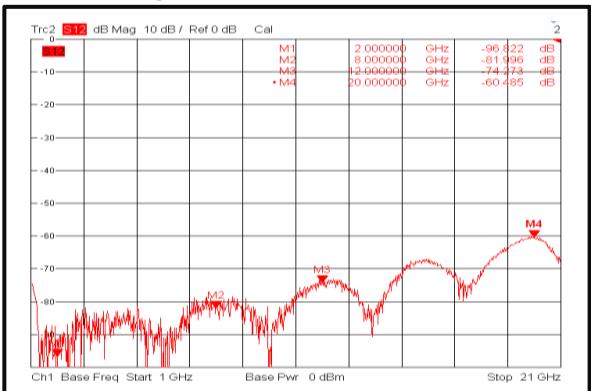
Input VSWR @+25°C



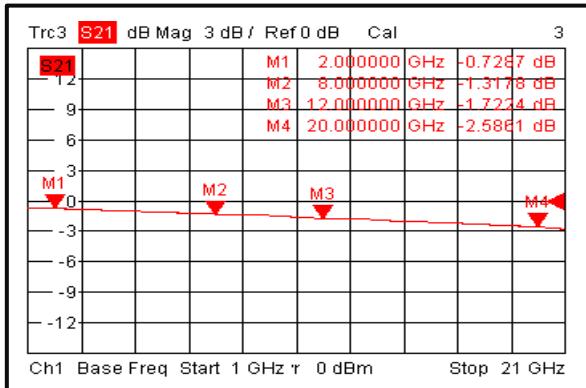
Output VSWR @+25°C



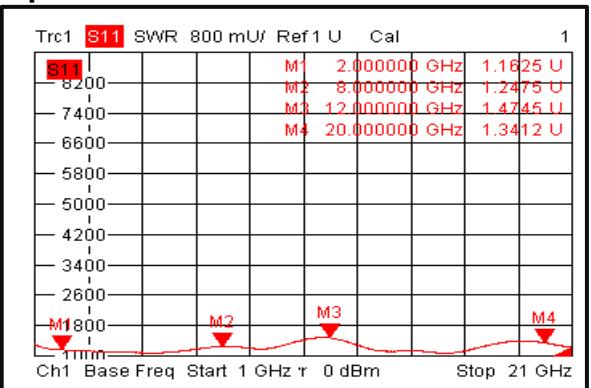
Isolation @+25°C



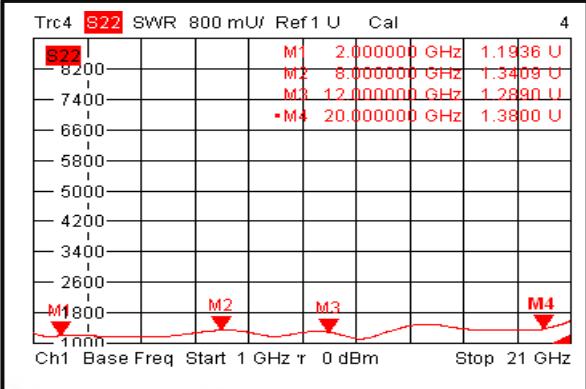
Insertion Loss @-40°C



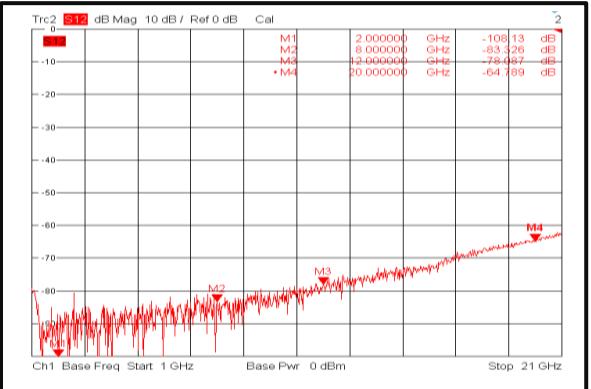
Input VSWR @-40°C



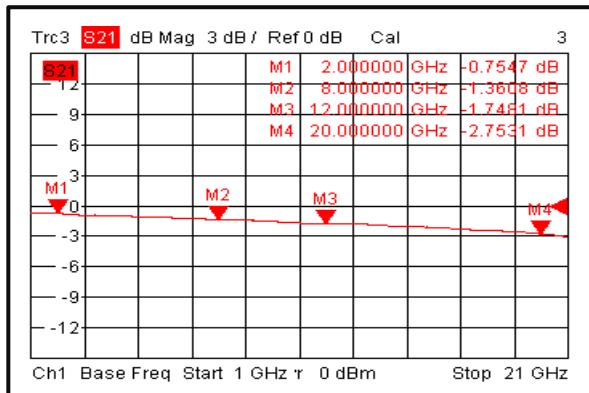
Output VSWR @-40°C



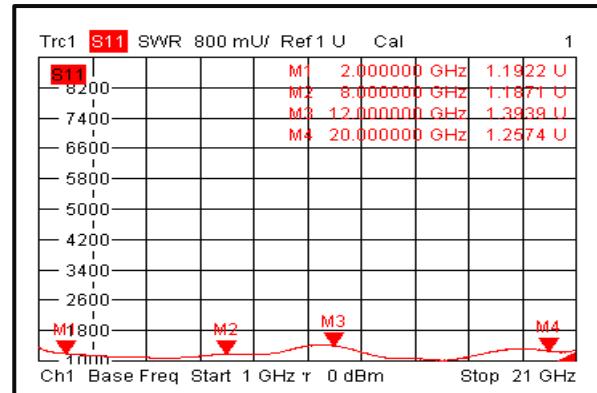
Isolation @-40°C



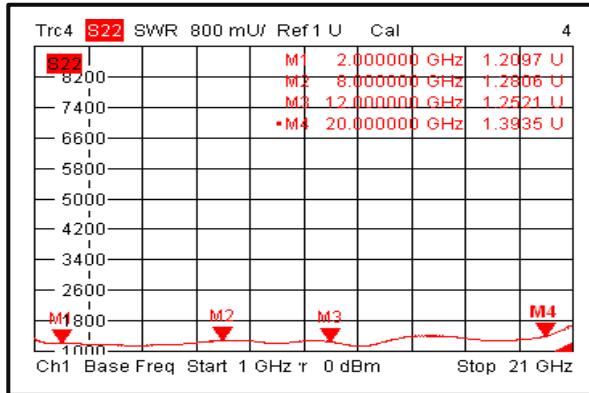
Insertion Loss @+85°C



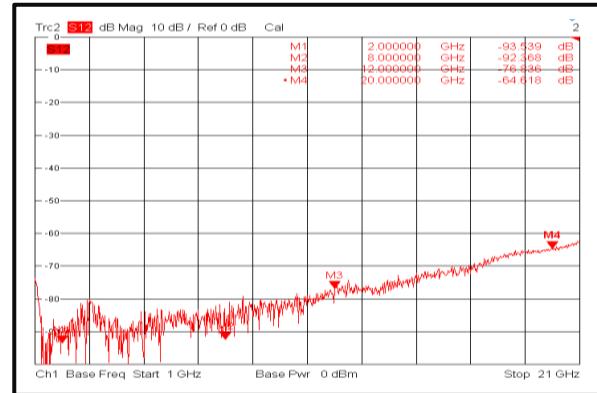
Input VSWR @+85°C



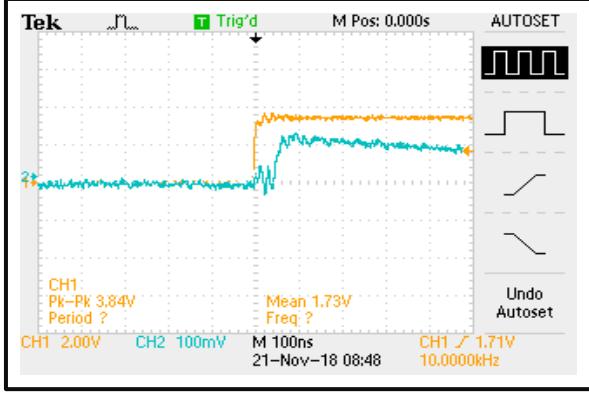
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

